CONFORMANCE TEST REPORT
FOR
EN 301489-1/-6

Report No.: 60.860.7.156.01E

Client:	SunCorp Communications Ltd.
Product:	DECT Phone
Model:	DECT20-B93 (PP)
Manufacturer/supplier:	Shenzhen Guo Wei Electronics Co., Ltd.

Date test item received:	2007/09/21
Date test campaign completed:	2007/10/08
Date of issue:	2007/10/11

Total number of pages of this test report: 16 pages

Approved by

Jeff Pong

TÜV SÜD Hong Kong Ltd.
Unit 601, InnoCentre, 72 Tat Chee Avenue, Kowloon Tong, Kowloon

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1 TEST REPORT CERTIFICATION

Client	: SunCorp Communications Ltd.	
Address	: Room 1907-08, 19/F, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong	
Manufacturer	: Shenzhen Guo Wei Electronics Co., Ltd.	
EUT	: DECT Phone	
Model No.	: DECT20-B93 (PP)	
Test Specifications	: Emissions EN 55022:2006(Class B)	Immunity EN 61000-4-2: 2001 EN 61000-4-3:2006
Regulations Applied	: EN 301489-1:V1.6.1 EN 301489-6:V1.2.1	

Test Location: T01

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

2 GENERAL INFORMATIONS

2.1 Description of EUT:

The Test Candidate is a portable part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on DECT Feature Phone-standard. For the integrated antennas a diversity-switch is included to the equipment. This portable part (PP) is used in combination with a fixed part (FP) for connections to the analogue public switched telephone network.

2.2 Related Informations of EUT:

Power Supply	:	2.4 Vdc						
Power Line	:	☐	Nonshielded	☐	Shielded	■	None ,	length: _____ m
Ears Line	:	☐	Nonshielded	☐	Shielded	■	None ,	length: _____ m
Control Line	:	☐	Nonshielded	☐	Shielded	■	None ,	length: _____ m
TEL. Line	:	☐	Nonshielded	☐	Shielded	■	None ,	length: _____ m
Signal Line	:	☐	Nonshielded	☐	Shielded	■	None ,	length: _____ m

* For more detailed features, please refer to *User's Manual*.

2.3 Modification Record:

No modifications were required. (That mean the EUT has complied with the requirement as tested.)

3 SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Radiated Emissions

■-PASS

Peak EMI value to the limit: -6.5 dB at 59.100 MHz

3.2 Immunity:

3.2.1 Immunity Criteria:

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

Performance criterion for Continuous Phenomena applied to DECT Phone Transceivers (CT):

The BER of the signal as measured shall not exceed 1×10^{-3} during the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35dB less than the previously recorded reference level. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data and the communications link shall have been maintained during and after tests. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Transient phenomena applied to DECT Phone Transceivers (TT):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Continuous phenomena applied to DECT Phone Receive-only equipment (CR):

The primary functions shall be verified during each individual exposure in the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35 dB less than the previously recorded reference level. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

Performance criterion for Transient phenomena applied to DECT Phone Receive-only equipment (TR):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

3.2.2 Electrostatic Discharge:

■-PASS

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.3 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):

■-PASS

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

4 TEST DATA & RELATED INFORMATIONS

4.1 Emissions:

4.1.1 Radiated Emissions Test:

4.1.1.1 Radiated Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 01, 2007

Test Specification	EN 55022: 2006 (Class B)	
Test Equipment	Calibration Date	Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 Ant.- LogBiconi\EMCO\3142	Oct. 23, 2006 Mar. 30, 2007	Oct. 22, 2007 Mar. 29, 2008
Climatic Condition	Ambient Temperature: 23◦ C	Relative Humidity: 63% RH
Power Supply System	DC Power: 2.4 Vdc	
Test Set-up	Table-top Equipment	

Emission **Frequency** (MHz)	**Meter Reading** (dBuV)		CORR'd **Factor** (dB/m)	**Results** (dBuV/m)		**Limit** (dBuV/m)	**Margins** (dB)
	HOR.	**VERT.**		**HOR.**	**VERT.**		
32.425	1.2	0.8	18.6	19.8	19.4	30	-10.2
56.675	6.4	***	9.4	15.8	***	30	-14.2
59.100	***	14.4	9.1	***	23.5	30	-6.5
122.150	4.2	***	9.4	13.6	***	30	-16.4
168.225	***	2.1	11.6	***	13.7	30	-16.3
173.075	1.7	***	11.6	13.3	***	37	-23.7
291.900	0.4	3.8	17.7	18.1	21.5	37	-15.5
367.075	***	0.6	20.5	***	21.1	37	-15.9
393.750	1.9	***	20.8	22.7	***	37	-14.3
430.125	***	1.6	21.4	***	23.0	37	-14.0

Notes: 1) Place of Measurement: Measuring site of the ETC (3F)

2) Measurement Distance: 10 m

3) Height of table on which the EUT was placed: 0.8 m

4) Height of Receiving Antenna: 1 - 4 m

5) Example Calculation: result for 32.425 MHz: 1.2+ (18.6) = 19.8 dB μ V/m

6) ① If the data table appeared symbol of "***" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

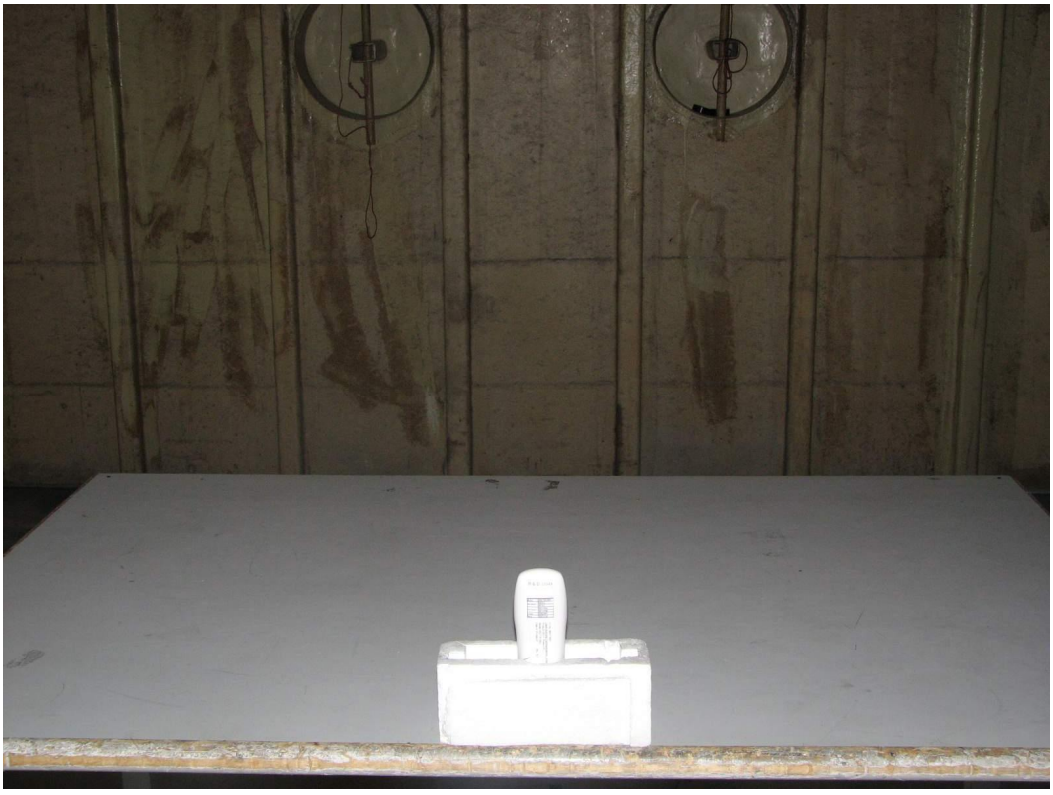
③ If the data table appeared symbol of “#“ means the noise was low, so record the peak

7) The estimated measurement uncertainty of the result measurement is

+ 4.5dB / - 4.6dB (30MHz $\leqq f \leqq$ 300MHz)

+ 4.3dB / - 4.3dB (300MHz $\leqq f \leqq$ 1GHz)

4.1.1.2 Radiated Emissions Test Setup Photos:



4.2 Immunity:

4.2.1 Electrostatic Discharge:

4.2.1.1 Electrostatic Discharge Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 08, 2007

Test Specification	EN 61000-4-2: 2001		
Test Equipment		Calibration Date	Recommended Recal. Date
ESD Simulator\Noiseken\ESS-2000-G365		Nov. 28, 2006	Nov. 27, 2007
Climatic Condition	Ambient Temperature: 25° C	Relative Humidity: 50 % RH	
	Atmospheric Pressure: 974 mbar		
Power Supply System	DC Power: 2.4 Vdc		
Test Set-up	Table-top Equipment		

Test Points	Contact Discharge (kV): Criterion					Air Discharge (kV): Criterion					Test times and voltage at each condition	
1.EUT-VCP	■2: _	■4: _	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■10..neg	■10..pos
2.EUT-HCP	■2: _	■4: _	□ 6: _	□ 8: _	□ _: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ _: _	■10..neg	■10..pos
3.EUT-Top Side	□ 2: _	□ 4: _	□ 6 : _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos
4.EUT-Bottom Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos
5.EUT-Front Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos
6.EUT-Rear Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos
7.EUT-Right Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos
8.EUT-Left Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ _: _	■2: _	■4: _	■8: _	□ 15: _	□ _: _	■10..neg	■10..pos

Result:	■ Complied	□ Does not comply	
Criterion Required:	B	Criterion Met:	A

Note: " A " means the EUT operates with ■ no loss of functions.

■ no unintentional responses during and after test.

" -- " means the test is not applicable.

4.2.1.2 Electrostatic Discharge Test Setup Photos:

4.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):

4.2.2.1 Radio Frequency Electromagnetic Field Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Sep. 29, 2007

Test Specification	EN 61000-4-3:2006	
Test Equipment	Calibration Date	Recommended Recal. Date
Microphone\B&K\4134 Conditioning Amplifier\B&K\type 2690 Audio Analyzer\R&S\UPA Signal Generator\Agilent\8648D RF Power Amplifier\AR\50S1G4AM1 Wide Band RF Amplifier\KALMUS\7100LC	Nov. 28, 2006 Nov. 28, 2006 May 29, 2007 May 29, 2007 May 29, 2007 Nov. 28, 2006	Nov. 27, 2007 Nov. 27, 2007 May 28, 2008 May 28, 2008 May 28, 2008 Nov. 27, 2007
Climatic Condition	Ambient Temperature: 23◦ C	Relative Humidity: 62 % RH
Power Supply System	DC Power: 2.4 Vdc	
Test Set-up	Table-top Equipment	

Frequency Range	: 80 MHz ~ 1000 MHz 1400 MHz ~ 2000 MHz	Field Strength : 3 V/m	Modulation (AM 1kHz 80%)
Sweep Rate	: ≤ 1.5×10^{-3} decades/s	Step Size : ≤ 1 % of preceding frequency value	Dwell Time : 2.9 s

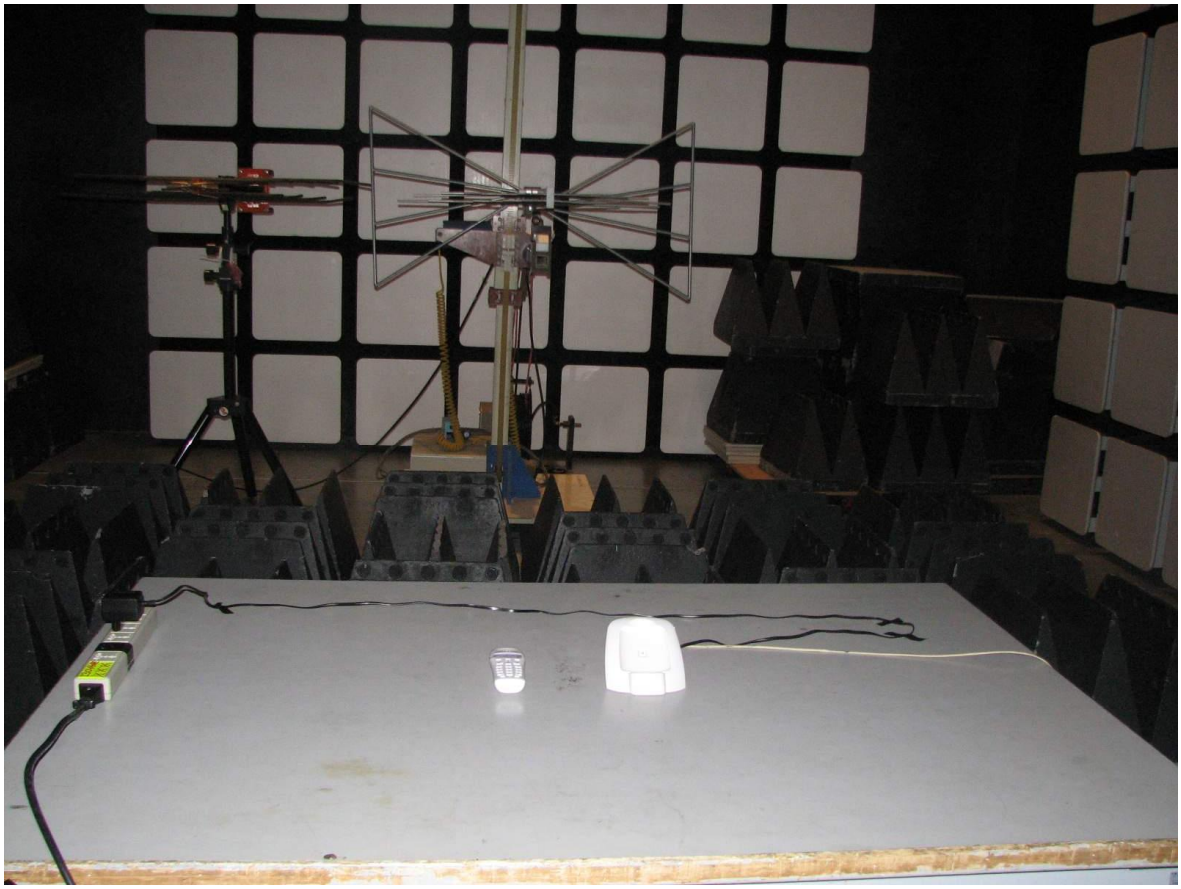
Frequency Range (MHz)	Polarization of Device	Test Result
80~1000	Vertical	A
80~1000	Horizontal	A
1400~2000	Vertical	A
1400~2000	Horizontal	A

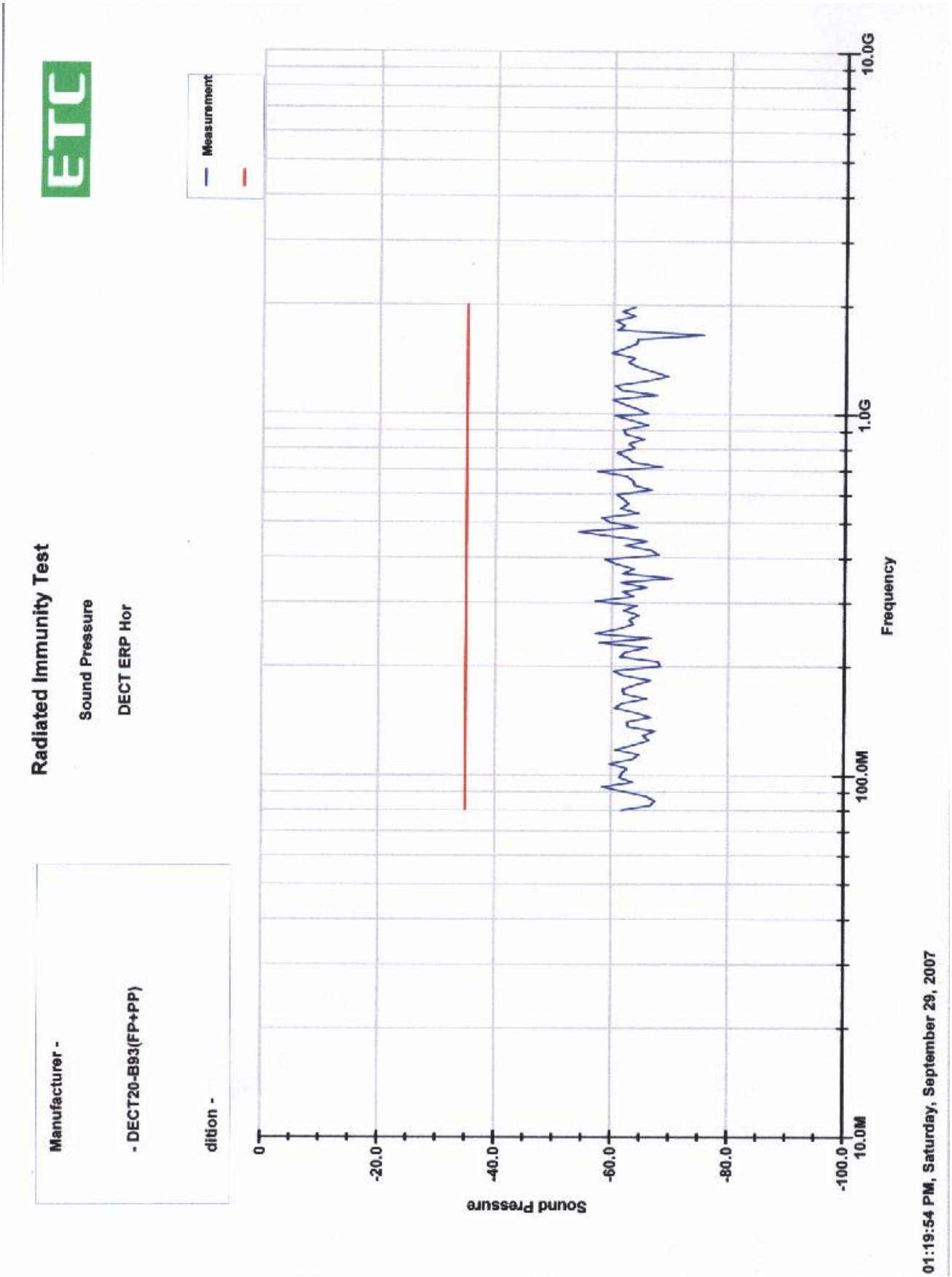
Note: " A " means the EUT operates with ■ BER less or equal than 1×10^{-3} during the test sequence.
■ the speech output signal level at least 35dB less than the previously recorded reference level.
■ no loss of user control functions or stored data and maintained communication link during and after the tests.
■ no unintentional transmission.

Remarks: Testing has been conducted at 3-meter anechoic chamber.

4.2.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz)

Test Setup Photos:




Radiated Immunity Test
Sound Pressure
DECT ERP Hor
Manufacturer -
- DECT20-B93(FP+PP)
dition -
Measurement
Sound Pressure
0
-20.0
-40.0
-60.0
-80.0
-100.0
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100.0M
1.0G
10.0G
Frequency
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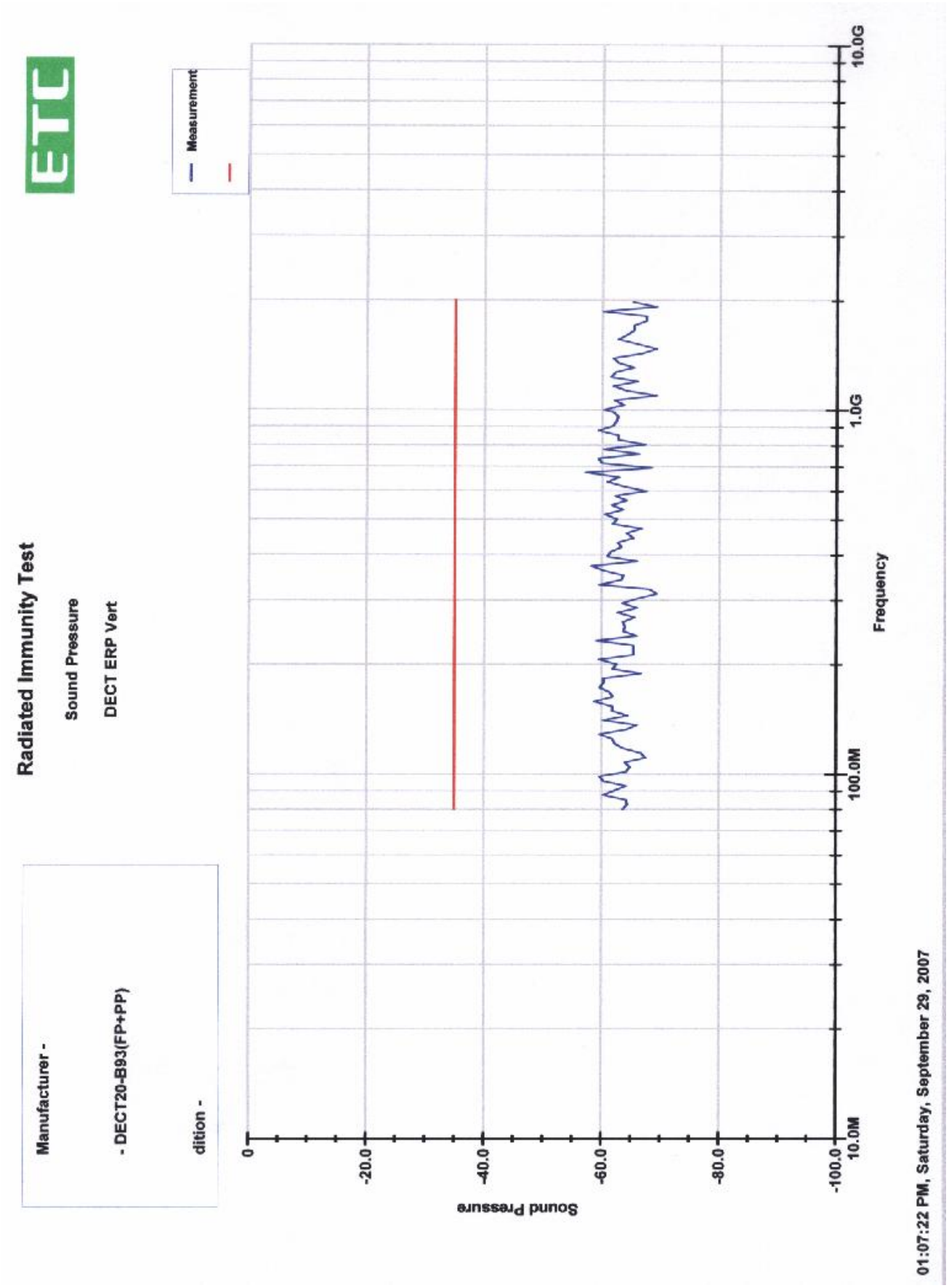
Radiated Immunity Test
Sound Pressure
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Manufacturer -
- DECT20-B93(FP+PP)
dition -
Measurement
Sound Pressure
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-20.0
-40.0
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Frequency
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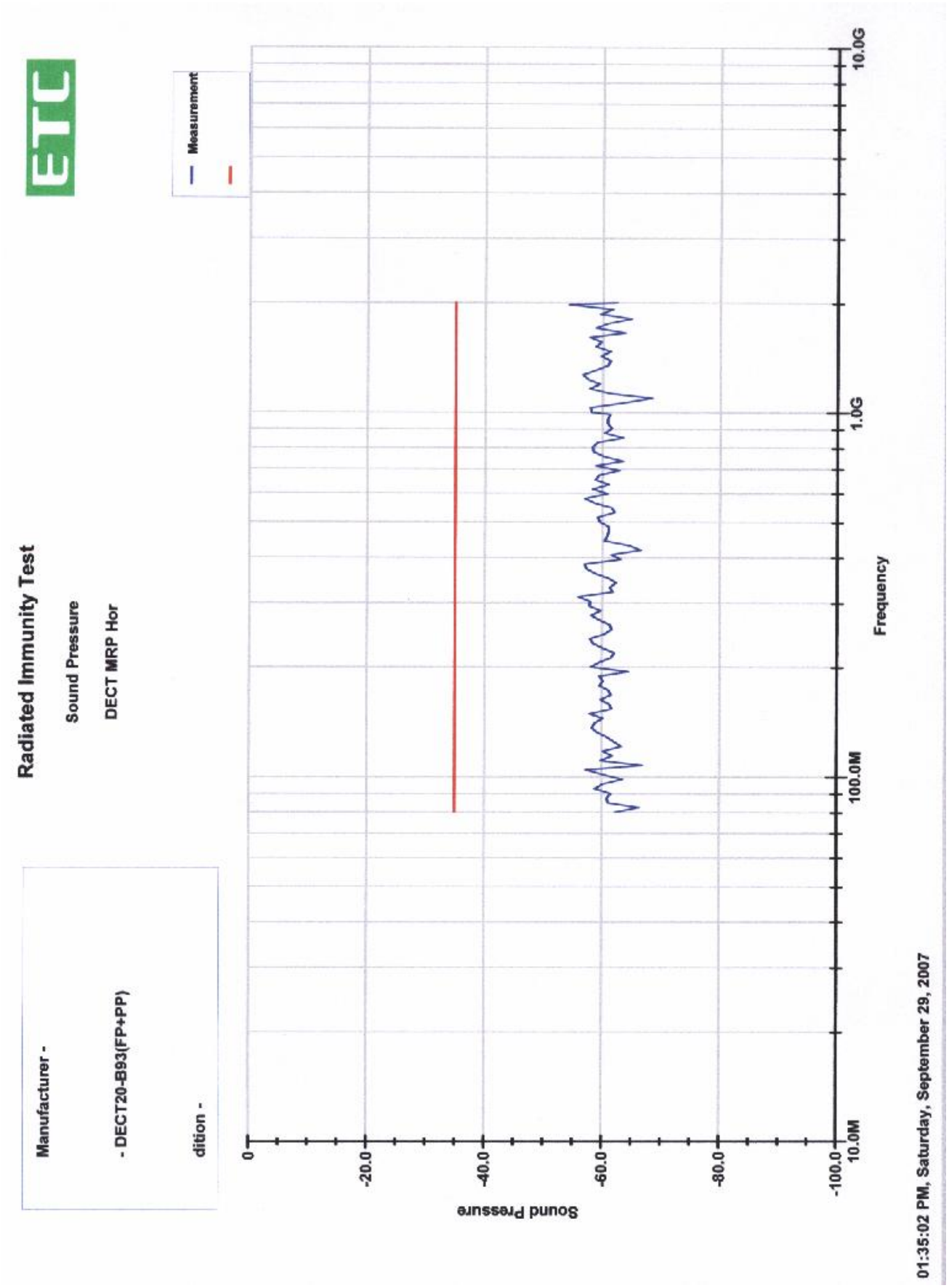
Radiated Immunity Test
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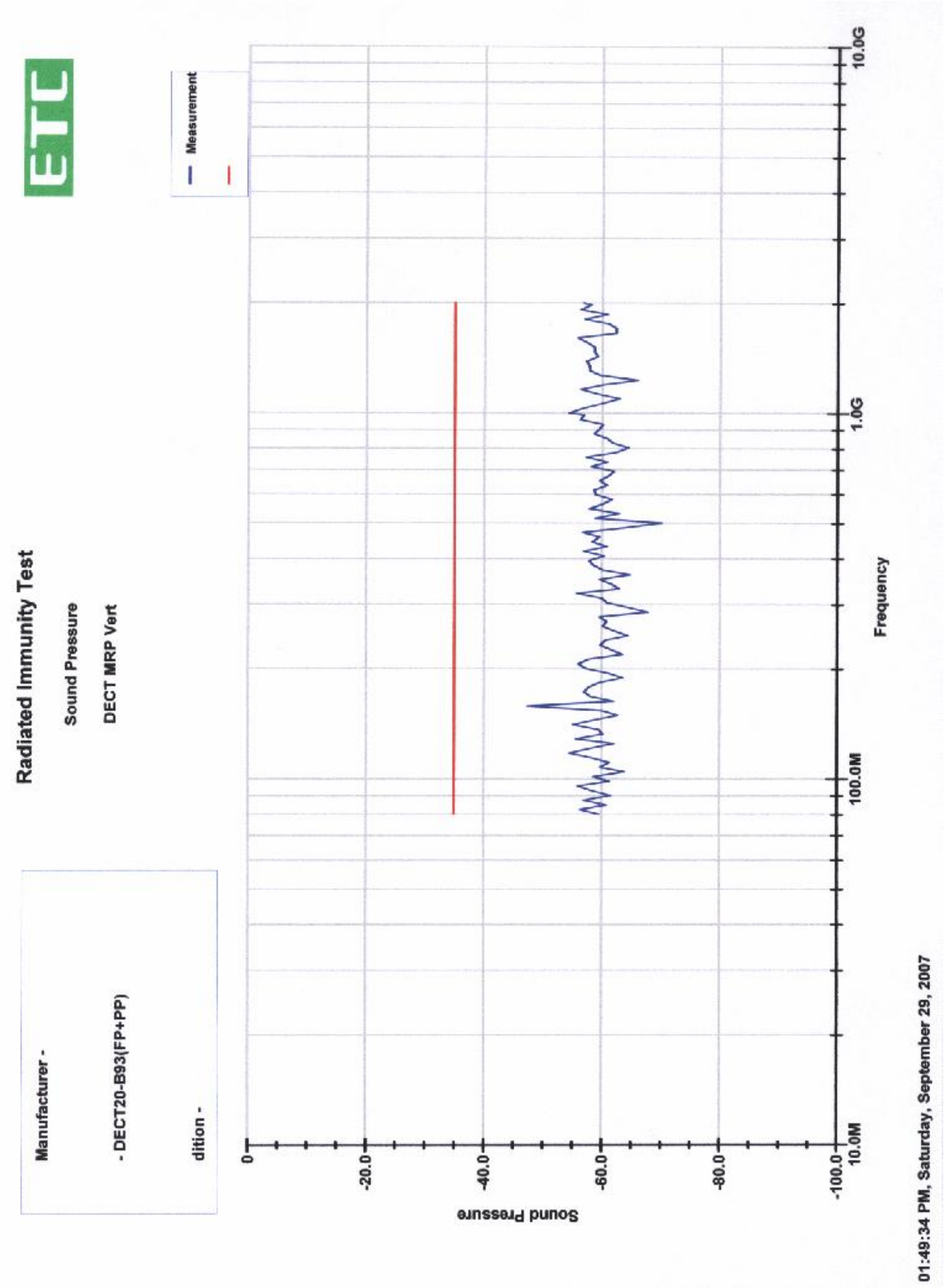
Radiated Immunity Test
Sound Pressure
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Manufacturer -
- DECT20-B93(FP+PP)
dition -
Measurement
Sound Pressure
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Frequency
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